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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/435,940	11/09/1999	LEWIS V. ROTHROCK	042390.P5387	5902

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EXAMINER	
WALLACE, SCOTT A	

ART UNIT	PAPER NUMBER
2671	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/435,940	ROTHROCK, LEWIS V.	
	Examiner	Art Unit	
	Scott Wallace	2671	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 November 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-31* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-31* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

Response to Arguments

1. Applicant's arguments with respect to claims 1-31 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1, 6-9, 14-17, 22-25, 27-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stansfield et al., U.S. Patent No. 5,140,314.

4. As per claims 1, 9 and 25, Stansfield et al discloses a method comprising: identifying first overlap information regarding where at least two digital images overlap at a first resolution level (column 5 lines 1-10); retrieving overlapping areas of the at least two digital images at a second resolution level higher than the first resolution level based on the first overlap information (column 5 lines 1-10); and identifying second overlap information regarding where overlapping ones of the retrieved overlapping areas overlap at the second resolution level (column 5 lines 1-10). However, Stansfield et al does not disclose purging the memory. This would be obvious to one of ordinary skill in the art at the time the invention was made because it was well known to purge memory of items when they are no longer needed to free up the memory.

5. As per claims 6, 14, 22 and 27, Stansfield et al discloses combining the at least two digital images (abstract).

6. As per claims 7, 15 and 23, Stansfield et al discloses identifying where the at least two digital images overlap at one or more resolution levels higher than the second resolution level (column 5 lines 1-

10, it does not give a restriction on the resolution level, therefore it could repeat the process at a different resolution higher than the originals).

7. As per claims 8, 16 and 24, Stansfield et al discloses identifying further, first overlap information regarding where another set of at least two digital images overlap at the first resolution level (column 1 lines 33-36 and column 5 lines 1-10); retrieving overlapping areas of the other set of at least two digital images at the second resolution level based on the further, first overlap information (column 5 lines 1-10); identifying further, second overlap information regarding where overlapping ones of the retrieved overlapping areas overlap at the second resolution level; and combining the digital images (column 5 lines 1-10).

8. As per claim 17, Stansfield discloses all the limitations of claim 17 as seen above except for one or more processors. It was well know for computer system to have more than one processor to increase the speed of applications.

9. As per claims 28, 29, 30 and 31, Stansfield et al discloses wherein the retrieving further comprises dividing each of the at least two digital images at the second resolution level into a plurality of tiles each having a size less than a threshold size (fig 3 and column 2 lines 68 and column 4 lines 10-23).

10. Claims 2, 10 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stansfield et al in view of Tanimoto et al., U.S. Patent No. 4,622,632.

11. As per claims 2, 10 and 18, Stansfield et al does not disclose wherein each of the at least two digital images are stored at the first and second resolution levels. It is disclosed in Tanimoto to store images at different levels of detail (column 2 lines 15-20) because this would allow faster speed when desiring an image at a specific resolution. Thus it would have been obvious to one of ordinary skill in the art to store the images of Stansfield et al at different resolutions.

12. Claims 3, 11, 19 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stansfield et al in view of Herman et al., U.S. Patent No. 6,075,905.

13. As per claims 3, 11, 19 and 26, Stansfield et al does not disclose dividing each of the at least two digital images into a plurality of areas at the second resolution level and storing the plurality of areas at the second resolution level in the memory to identify where the plurality of overlap at the second resolution level. This is disclosed in Herman et al in column 9 lines 1-27. It would have been obvious to one of ordinary skill in the art at the time the invention was made divide the images into a plurality of areas because this would improve the alignment of the images of Stansfield et al.

14. Claims 4, 12 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stansfield et al in view of Hsieh et al., U.S. Patent No. 6,011,558.

15. As per claims 4, 12 and 20, Stansfield et al discloses identifying where the at least two digital images overlap at the first resolution level and the identifying where overlapping ones of the areas at the second resolution level overlap (column 5 lines 1-10). However, Stansfield et al does not disclose using an edge detection technique to identify overlap information. This is disclosed in Hsieh et al in fig 5 and column 5 lines 63-67 and column 6 lines 1-21. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use edge detection to determine overlap because this was a fast method to see which edges both images had in common and therefore in the overlap region.

16. Claims 5, 13 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stansfield et al in view of Schmucker et al., U.S. Patent No. 5,991,461.

17. As per claims 5, 13 and 21, Stansfield et al disloses looking at where two images overlap at different resolutions. However, Stansfield does not disclose identifying the coordinates the coordinates of the overlap regions. This is disclosed in Schmucker et al in column 5 lines 19-34. It would have been obvious to one of ordinary skill in the art at the time the invention was made to identify the coordinates in the overlap regions because this would help ensure a more accurate and appropriate overlap region.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Scott Wallace** whose telephone number is **703-605-5163**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Mark Zimmerman**, can be reached at 703-305-9798.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

MARK ZIMMERMAN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600